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(54) Method and system for transferring funds and secure information between secure devices

(57) Postal metering systems with an external communication link which allows funds to be transferred from one postal metering system to another. The external communication link is provided between the safekeeping device of a first postal metering system to the secure communication device of a second postal metering system so that funds can be transferred through the external communication link from the second metering system from its secure communication device to the safekeeping device of the first postal metering system. Furthermore, when the safekeeping device also stores secure information, secure information can be transferred from the second metering system to the first metering system in the same manner. The safekeeping device and the secure communication device are commonly known as the postal secure device (PSD) and the gatekeeper.

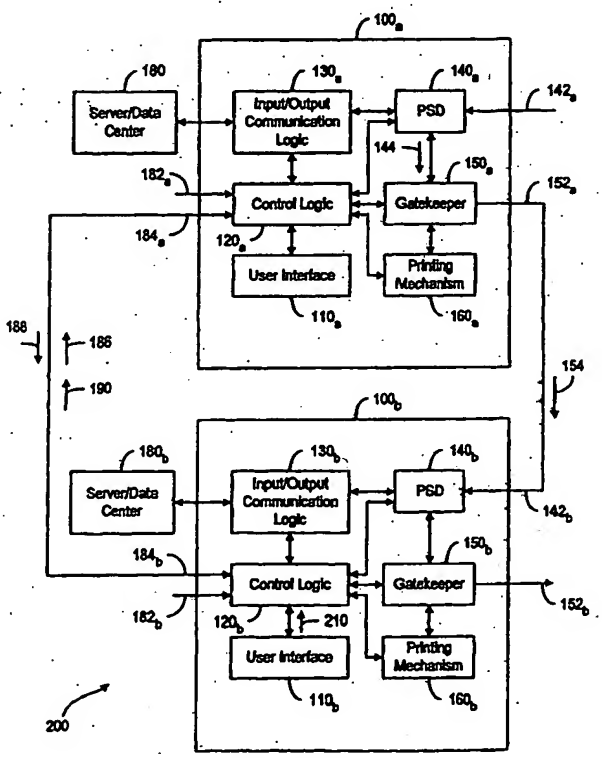

Fig. 3A

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Description

[0001] The present invention relates generally to secure devices such as postal meters and, more particularly, to transferring funds or other information between security devices.

[0002] Presently, there are two postal metering device types: a closed system and an open system. In a closed system, the system functionality is solely dedicated to metering activity. The closed-system metering devices are also referred to as postage-evidencing devices, which include conventional digital and analog (mechanical and electronic) postal meters, wherein a dedicated printer is securely coupled to a metering or accounting function. Furthermore, the printer is securely coupled and dedicated to the meter, and printing evidence of postage cannot take place without accounting for the evidence. In an open system, the printer is not dedicated to the metering activity, thereby freeing system functionality for multiple and diverse uses in addition to the metering activity. Examples of open system metering devices include personal-computer (PC) based devices with single/multi-tasking operating systems, multi-user applications and digital printers. An open-system metering device is a postage evidencing device with a non-dedicated printer that is not securely coupled to a secure accounting module. An open-system indicium printed by the non-dedicated printer is made secure by including addressee information in the encrypted evidence of postage printed on the mailpiece for subsequent verification. See U.S. Patent Numbers 4,725,718 and 4,831,555, each assigned to the assignee of the present invention.

[0003] The United States Postal Service (USPS) has published draft specifications for IBIP (Information Based Indicia Program). These specifications define the proposed requirements for a Postal Security Device (PSD). A PSD is a secure processor-based accounting device that dispenses and accounts for postal value stored therein to support the creation of a new information-based postage postmark or indicium that will be applied to a mailpiece being processed using IBIP. The IBIP Specifications define a stand-alone, open-metering system, referred to herein as a PC Meter. The PC Meter comprises a PSD coupled to a Host PC, which is a personal computer (PC) operating as a host system with a printer coupled thereto. The Host PC runs the metering application and communicates with one or more attached PSD's. The PC Meter can only access PSD's coupled to the Host PC. There is no remote PSD access for the PC Meter.

[0004] The PC Meter processes transactions for dispensing postage, registration and refills on the Host PC. Processing is performed locally between the Host PC and the PSD coupled thereto. Connections to a Data Center, for example, for registrations and refill transactions, are made locally from the Host PC through a local or network modem/internet connection. Accounting for debits and credits to the PSD is also performed locally, logging the transactions on the Host PC. The Host PC may accommodate more than one PSD, for example, supporting one PSD per serial port.

[0005] One version of a network metering system, referred to herein as a virtual postal metering system, has many Host PC's without any PSD's coupled thereto. The Host PC's run Host Applications, but all PSD functions are performed by server(s) located at a Data Center. The PSD functions at the Data Center may be performed in a secure device attached to a computer at the Data Center, or may be performed in the Data Center computer itself. The Host PC's must connect with the Data Center to process transactions such as postage dispensing, meter registration, or meter refills. Transactions are requested by the Host PC and are sent to the Data Center for remote processing. The transactions are processed centrally at the Data Center, and the results are returned to the Host PC. Accounting for funds and transaction processing is centralized at the Data Center (See, for example, U.S. Patent Numbers 4,873,645 and 5,454,038, which are assigned to the assignee of the present invention). Typically, when a user makes a request via the Host PC to a Data Center for proof of postage payment for a mailpiece, the Host PC sends a group of standard mailing parameters, such as the user's full address and amount of postage requested, to the Data Center. After validating the user and the account balance, the Data Center uses the PSD to issue a digital signature/token based on the provided standard mailing parameters and sends the digital signature to the postal meter or printer so that the meter or the printer can print an indicium on the mailpiece as proof of postage payment.

[0006] In U.S. Patent Numbers 4,873,645 and 5,454,038, a virtual postal metering system and method are disclosed, wherein the postal accounting and token generation occur at a data center remote from the postage-evidencing printer. Although the Data Center may be a secure facility, there remain certain inherent security issues since the accounting and token generation functions do not occur in a secure device local to the postage printer. The virtual postal metering system includes a computer coupled to an unsecured printer and to a remote data metering system. The postal accounting and the token generation occur at the Data Center. The Data Center is a centralized facility under the control of a meter vendor, such as Pitney Bowes Inc., Stamford, Connecticut, USA or the Postal Service. As such, it is regarded as secure compared to the environment where mailers handle meters directly.

[0007] Presently, in a closed system, a postal meter is unidirectional in that the funds are loaded at the Data Center and the fund balance is deducted every time an indicium is printed. In an open system, the fund is stored in the PSD but it must be loaded through the Data Center. In a sense, such an open metering system is also a unidirectional device. In a virtual postal metering system

as described above, the PSD functions are performed by servers at the Data Center. Thus, in prior art, the transfer of funds to a postal meter, regardless of the meter type, must be carried out through a Data Center to which the postal meter is operatively coupled, as shown in Figure 1. The prior art postal meter 1, as shown in Figure 1, comprises a user interface 10, a control logic unit 20, an input/output communication logic unit 30, a PSD 40, a gatekeeper 50 and a printing mechanism 60. The user interface 10 allows a customer to specify the postage amount of the indicium to be printed. The control logic unit 20, upon receiving a signal from the user interface 10, notifies a PSD 40 of the specified postage amount. The PSD 40 checks to see whether the funds stored therein are sufficient to pay for the postage. If so, the PSD 40 sends a signal indicative of the indicium to the gatekeeper 50. When the user activates the postage meter 1 with a mailpiece on which the indicium is to be printed, a trip signal 82, via the control logic unit 20, causes the gatekeeper 50 to transfer the postage amount from the PSD 40 to the printing mechanism 60. Subsequently the requested indicium is printed. Whereas the PSD 40 keeps track of the funds stored in the postal meter 1 and authorizes a portion of the stored funds to be used for the postage indicium, the most important function of the gatekeeper 50 is to maintain a secure connection between the PSD 40 and the printing mechanism 60. It should be noted that prior to the advent of the digital postage meter, security in a mechanical meter was achieved by physically keeping the funds and printing within the same sealed box. Even after electronic meters became available in the market, the concept of security remains substantially unchanged. However, with digital postage meters, the funds and the printing are physically separated but connected by a cable. The cable must be secure so as to secure the funds in the digital postage meter. For that reason, the gatekeeper is implemented in a postal meter, not only to control and generate functions related to indicium printing, but also to keep the communication between the printing mechanism and the PSD secure. The input/output communication logic unit 30 allows the transfer of funds between a data center 80 and the postal meter 1. With the input/output communication logic unit 30, a customer uses the interface 10 to request the transfer of funds from the data center 80. The prior art system allows transfer of funds only between the data center and the postal meter 1.

[0008] Presently, it is not possible to transfer funds between two postal metering systems even if these metering systems are in the possession of the same individual or business entity. Thus, it is advantageous and desirable to provide a method and system for enabling one postal meter to transfer funds to another postal meter, or enabling one PSD to transfer funds or other information to others PSD's,.

[0009] It is an objective of the present invention to allow a postal metering system to receive funds from another postal metering system, in addition to receiving funds from a data center. This objective can be achieved by providing an external communication link between two postal metering systems.

[0010] Accordingly, the first aspect of the present invention is a method of transferring funds between postal metering systems, wherein at least a first postal metering system and a second postal metering system each comprises: a safekeeping device for storing and releasing funds; a secure communication device for ensuring that communications with the safekeeping device are secure; an input/output communication module, operatively connected to the safekeeping device, to allow funds to be transferred from a data center to the safekeeping device via the input/output communication module; and a control device, operatively connected to the secure communication device, for causing a release of funds by the safekeeping device through the secure communication device when the control device receives a request for said fund release. The method comprises the steps of: providing an external communication link from the first postal metering system to the second postal metering system; and transferring funds through the external communication link from the second postal metering system from its secure communication device to the safekeeping device of the first postal metering system.

[0011] Advantageously, the fund transfer through the external communication link is in response to a request made at the control device of the first postal metering system. The method further comprises the steps of: sending a request of said fund transfer through the external communication link, said request conveyed from the control device of the first postal metering system to the control device of the second postal metering system; and granting said request by the second postal metering system.

[0012] Advantageously, the method further comprises the steps of conveying a first signal from the control device of the second postal metering system to the control device of the first postal metering system indicative of said granting; and conveying a second signal from the control device of the first postal metering system to the control device of the second postal metering system acknowledging receipt of the first signal, thereby causing said fund transfer through the external communication link.

[0013] Alternatively, the fund transfer through the external communication link is in response to a request made at the control device of the second postal metering system, and the method further comprises the step of: conveying a first signal from the control device of the second postal metering system to the control device of the first postal metering system notifying said fund transfer through the external communication link; and conveying a second signal from the control device of the first postal metering system to the control device of the second postal metering system acknowledging receipt

of the first signal, thereby causing said fund transfer through the external communication link.

[0014] Advantageously, the external communication link comprises a wireless communication link.

[0015] Advantageously, the postal metering systems further comprises at least a third metering system, which includes a safekeeping device for storing and releasing funds; and a secure communication device for ensuring that communications with the safekeeping device are secure. The method further comprises the steps of: providing a further external communication link from the second postal metering device to the third metering system; and transferring funds through the further external communication link from the second postal metering device from its secure communication device to the safekeeping device of the third metering system.

[0016] Advantageously, the safekeeping device also stores secure information and the control device is capable of causing a release of information by the safekeeping device through the secure communication device through the external communication link.

[0017] The second aspect of the present invention is a postal metering system comprising: a safekeeping device for storing and releasing funds; a secure communication device for ensuring that communications with the safekeeping device are secure; an input/output communication module, operatively connected to the safekeeping device, to allow funds to be transferred from a data center to the safekeeping device via the input/output communication module; and a control device, operatively connected to the secure communication device, for causing the safekeeping device to release funds through the secure communication device when the control device receives a request for said fund release, wherein the safekeeping device further comprises an external communication link so as to allow the postal metering system to receive funds from another postal metering system via the secure communication device thereof through the external communication link.

[0018] The third aspect of the present invention is a secure system, which comprises: a safekeeping device for storing and releasing secure information; a secure communication device for insuring communications with the safekeeping device are secure; an input/output communication module, operatively connected to the safekeeping device, to allow secure information to be transferred from a data center to the safekeeping device; and a control device, operatively connected to the secure communication device, for causing a release of secure information by the safekeeping device through the secure communication device upon receiving a request for said fund release, wherein the safekeeping device further comprises an external communication link so as to allow the secure system to receive secure information from another secure system via the secure communication device thereof through the external communication link.

[0019] The present invention will become apparent upon reading the description taken in conjunction with Figures 2 to 7.

[0020] Figure 1 is a block diagram showing a prior art postal meter connected to a Data Center for transferring funds therebetween.

[0021] Figure 2 is a block diagram showing a preferred postal meter system, according to the present invention.

[0022] Figure 3a is a block diagram showing the connection between two postal metering systems, according to the present invention, for transferring funds from one system to another.

[0023] Figure 3b is a block diagram showing the connections between two postal metering systems for transferring funds in a different fashion.

[0024] Figure 4 is a block diagram showing a wire connection among a plurality of postal metering systems, according to the present invention.

[0025] Figure 5 is a flowchart illustrating the method of secure fund transfer between a donor meter and a recipient meter, according to the present invention.

[0026] Figure 6 is a block diagram showing the connection between two hand-held postal meters, according to the present invention, for transferring funds.

[0027] Figure 7 is a block diagram showing a generalized secure system for transferring secure information, according to the present invention.

[0028] For illustration purposes, the present invention is described in conjunction with a postal metering system, as shown in Figures 2-6. However, the present invention is applicable to any secure device, as shown in Figure 7.

[0029] Typically, the postal meter **100**, according to the present invention, can be used to print postage indicia (not shown) to be used on mailpieces. As with the prior art postal meter **1**, printing indicia upon request is a normal function of the meter **100**. As shown in Figure **2**, the postal meter **100** comprises a user interface **110**, a control logic unit **120**, an input/output communication logic unit **130**, a postal secure device (PSD) **140**, a gatekeeper **150** and a printing mechanism **160**. As with the prior art postal meter **1**, the postal meter **100** can be linked to a data center **180** for transferring funds therebetween via the input/output communication logic unit **130**. In contrast to the prior art postal meter **1**, the control logic unit **120**, the PSD **140** and the gatekeeper **150** are capable of communicating with other postal meters **100**, via communication lines **184**, **142** and **152**, respectively. The signal line **182** is used to provide a trip signal when a customer activates the postal meter **100** by a mailpiece on which the requested indicium is printed.

[0030] The gatekeeper **150**, according to the present invention, is operatively connected between the PSD **140** and the printing mechanism **160** so as to maintain a secure connection therebetween regarding the printing of postage indicia. In addition, the gatekeeper **150** maintains a secure connection between the PSD **140** and an external device. More specifically, when the

postal meter **100** is required to transfer funds out of the postal meter **100** to another postal meter, the gatekeeper **150** maintains a secure connection between the PSD **140** of the postal meter **100** and the PSD of the other postal meter, as shown in Figure 3a.

[0031] Figure 3a shows the connection between a postal meter 100_a and a postal meter 100_b in a system **200** so as to allow the postal meter 100_a to transfer funds to the postal meter 100_b. In this case, the postal meter 100_a is the donor meter and the postal meter 100_b is the recipient meter. For example, when a customer enters a request **210** through the user interface 110_b of the postal meter 100_b, the control logic unit 120_h determines whether the request **210** is for the normal function of indicium printing, or for the additional function of fund transfer. If it is a printing request, the postal meter 100_b carries out its normal function of indicium printing as described in conjunction with the prior art meter **1**. If the request **210** is for transferring funds from postal meter 100_a to postal meter 110_b, the control logic unit 120_b sends a signal **186** via the signal line 184_b to the control logic unit 120_a requesting such a fund transfer. Upon receiving the fund transfer request **186** via the signal line 164_a, the control logic unit 120_a notifies the PSD 140_a of such request. The PSD 140_a checks to see whether there are sufficient funds stored therein for such a transfer and whether the funds transfer is authorized. Subsequently, the PSD 140_a sends a signal **144** indicative of the transferred funds to the gatekeeper 150_a. At the same time, the control logic 120_a notifies the control logic 120_b with a signal **188** that the request is granted. The control logic 120_b notifies the PSD 140_b that the requested funds are now available, and sends an acknowledgment signal **190** to the control logic 120_a. Similar to the trip signal 182_a, which causes the gatekeeper 150_a to transfer the postage amount from the PSD 140_a to the printing mechanism 160_a, the signal **190** causes the gatekeeper 150_a to transfer the funds **154** from the PSD 140_a to the PSD 140_b. Accordingly, the PSD 140_b stores the received funds **154** in the postal meter 100_b and the PSD 140_a reduces the stored funds therein.

[0032] Using a similar connection, the customer of the postal meter 100_b can also authorize a funds transfer from the postal meter 100_b to the postal meter 100_a by inputting a command **212** using the user interface 110_b, as shown in Figure 3b. In this case, the control logic unit 120_b notifies the PSD 140_b and the control logic unit 120_a of such transfer. Upon receiving the signal **192**, the control logic unit 120_a notifies the PSD 140_a of the forthcoming event. Subsequently, the control logic 120_a notifies the control logic 120_b via a signal **194** that the postal meter 100_a is ready to receive the transferred funds. The signal **194** causes the gatekeeper 150_b to release the authorized funds **156** from the PSD 140_b to the PSD 140_a.

[0033] Wireless connection among a number of postal meters **100** is shown In Figure 4. In the system **300**, as shown in Figure 4, a donor meter 100_d is adapted to receive funds from the data center **180** and acts as a distributor of funds to one or more postal meters 100_1,..., 100_n. Each of the postal meters 100_d, 100_1,..., 100_n comprises a transceiver **170**, operatively connected to its control logic unit **120**, PSD **140** and gatekeeper **150** so that it can communicate with other postal meters in a wireless fashion. Using the arrangement as shown in Figure 4, the bulk of the funds can be stored in one vault in one meter to be distributed to other meters upon request. As shown, the funds are stored in the vault **172** in the donor postal meter 100_d. Funds can then be downloaded to any of the recipient postal meters 100_1,..., 100_n, in smaller amounts, from the donor postal meter 100_d. When funds are downloaded to a recipient postal meter 100_n from the donor postal meter 100_d, secure communication of funds is carried out from the gatekeeper **150** of the donor to the PSD **150** of the recipient, in a procedure similar to that described in conjunction with Figure 3a. Advantageously, not all the postal meters need to store a large fund. Thus, the total amount of funds required for all postal meters is substantially reduced. As such, fund control and management can be improved. In the arrangement, as illustrated in Figure 4, only one analog link (between the data center **180** and the donor postal meter 100_d) is required. This reduces the number of multiple analog lines necessary for the postal meters to communicate with the data center.

[0034] In the arrangement as shown in Figures 3a and 3b, any meter unit may act as donor or recipient. In the arrangement shown in Figure 3a, the unit making the request can be referred to as the recipient unit or RU and the other unit can be referred to as donor unit or DU, An exemplary sequence for making a funds transfer request is summarized as follows:

[0035] 1. User enters amount to be transferred to the RU.

[0036] 2. User hits a request key.

[0037] 3. The DU checks to make sure it has sufficient funds to transfer. If it does not have sufficient funds, it sends back a "not sufficient fund" signal and the operation is terminated. Otherwise the fund transfer is initiated. When the transfer is completed, the RU displays a "transaction completed".

[0038] In this sequence, the operation is initiated at the RU by the user using the user interface, The signal input through the user interface is detected by the control logic, which checks through the RU gatekeeper for funds from the DU PSD. The DU PSD sends a granted or not granted signal to the RU through the DU control logic unit via the request line. If granted, the RU sends an acceptance signal via its user interface, control logic to the DU control logic, which notifies the DU PSD of the acceptance. Finally, the DU PSD sends funds through DU gatekeeper to RD PSD. All the activities described above involve the control logic units of both meters.

[0039] The connection between two postal meters 100_a and 100_b, as shown in Figures 3a and 3b, can be

wired or wireless. For example, the postal meters 100_a and 100_b can be operatively connected to each other via a router or a server (not shown) in a local network of the Internet environment. Similarly, the postal meters 100_a and 100_b can be connected to each other via modems (not shown). Thus, the present invention is applicable to stand-alone systems as well as systems connected to the Internet or any communications network. Furthermore, the present invention uses the device known as Meter PSD as well as the infrastructure for remote funds and information downloading.

[0040] In the fund transfer process between a donor meter and a recipient, as described in conjunction with Figure 3a, in particular, the process involves essentially three stages: 1) The recipient meter makes a request for fund transfer thereto; 2) the donor meter grants or denies the request, based on whether it has sufficient funds and whether the transfer is authorized, for example; and 3) the recipient accepts the granting or cancels the request, due to the request amount being entered erroneously, for example. Accordingly, the process can be illustrated in the flowchart as shown in Figure 5. As shown, the process **400** comprises a standby mode at step **410** in which the donor meter does nothing but waits for a request to be initiated by a recipient meter, at step **420**. The request can be represented by the signal **186** in Figure 3a, for example. In response to the request, the donor meter checks to see whether it has sufficient funds to transfer and whether the requesting meter is authorized for such a transfer. If the answers are in the affirmative, the donor meter grants request of the recipient at step **430**, and the process continues at step **440**. Otherwise, the transaction is terminated and the process loops back to the standby mode **410**. The granting message from the donor meter to the recipient meter can be represented by the signal **188** in Figure 3a, for example. Upon receiving the granting message, the recipient meter has a choice to continue the process by accepting the funds to be transferred by the donor meter or to cancel the transaction. If the recipient meter decides to continue the process, it sends an acceptance signal to the donor meter. The acceptance signal can be represented by the signal **190** of Figure 3a, for example. Subsequently, the donor meter, at step **450**, transfers the request funds from its gatekeeper to the PSD of the recipient meter, as indicated by signal **154** of Figure 3a. The transaction is now completed and the process loops back to the standby mode at step **410**.

[0041] The method of fund transfers between postal meters **100**, according to the present invention, is applicable to a hand-held metering unit **100'** (without a printing mechanism) whether the hand-held metering unit is linked to a regular postal meter **100** (with a printing mechanism) or another hand-held metering unit **100'**. Figure 6 illustrates the connection between two hand-held metering units **100'**. Either metering unit **100'** can be a recipient while the other can be the donor. For example, if the metering unit **100'a** is the donor, then funds **154'a** can be transferred from the gatekeeper **150'a** to the PSD **140'b**. Likewise, if the metering unit **100'b** is the donor, the funds **154'b** can be transferred from the gatekeeper **150'b** to the **PSD 140a'**. Either metering unit can be linked to the data center **180** for fund transfer between the data center and the requesting metering unit.

[0042] It should be noted that the postal meter **100**, as illustrated in Figure 2, is only a special embodiment of the secure device of the present invention. A generalized secure device, according to the present invention, is shown in Figure 7. In a postal meter **100**, the general function of the PSD **140** is to dispense and account for postal value stored therein to pay for the postage indicia, In that respect, the PSD **140** is a safekeeping module. The general function of the gatekeeper **150** is to secure the communication between the PSD **140** and the printing mechanism **160** of the same postal meter **100** or the PSD **140** of a recipient postal meter **100**. The gatekeeper **150** can be referred to as a secure communication module. Likewise, the printing mechanism **160** is a type of output device. Thus, instead of having a PSD **140**, a gatekeeper **150** and a printing mechanism **160**, the generalized secure device **100"**, as shown in Figure 7, comprises a safekeeping module **140"**, a secure communication module **150"** and an output device **160"**. In addition to transferring funds, the secure device **100"** can also be used to transfer secure information. Analogous to the printing mechanism **160** in a postal meter **100**, the output device **160"** can be used to display secure information upon receiving a request made by a customer using the user interface **110"**. Secure information can be transferred from the safekeeping module **140"** through the secure communication module **150"** of a "donor" secure device **100"** to the safekeeping module **140"** of a "recipient" secure device **100"**. The transaction between a "donor" secure device **100"** and a "recipient" secure device **100"** is similar to the transaction between a donor meter **100** and a recipient meter **100** as described in conjunction with Figure 3a. The method of secure transaction, as illustrated in Figure 5, is also applicable to the secure device **100"** if the term "fund" in blocks **440** and **450** of flowchart **400** is replaced by "secure information".

[0043] Thus, although the invention has been described with respect to a preferred embodiment thereof, it will be understood by those skilled in the art that the foregoing and various other changes, omission and deviations in the form and detail thereof may be made without departing from the scope of this invention.

Claims

1. A method of transferring funds between postal metering systems, wherein at least a first postal metering system and a second postal metering system each comprises:

a safekeeping device for storing and releasing funds;
a secure communication device for ensuring that communications with the safekeeping device are secure;
an input/output communication module, operatively connected to the safekeeping device, to allow funds to be transferred from a data center to the safekeeping device via the input/output communication module; and
a control device, operatively connected to the secure communication device, for causing a release of funds by the safekeeping device through the secure communication device when the control device receives a request for said fund release, said method comprising the step of:

providing an external communication link from the first postal metering system to the second postal metering system: and
transferring funds through the external communication link from the second postal metering system from its secure communication device to the safekeeping device of the first postal metering system.

2. The method of claim 1, wherein said fund transfer through the external communication link is in response to a request made at the control device of the first postal metering system.

3. The method of claim 2. further comprising the steps of:

sending a request of said fund transfer through the external communication link, said request conveyed from the control device of the first postal metering system to the control device of the second postal metering system; and
granting said request by the second postal metering system.

4. The method of claim 3, further comprising the steps of:

conveying a first signal from the control device of the second postal metering system to the control device of the first postal metering system indicative of said granting; and
conveying a second signal from the control device of the first postal metering system to the control device of the second postal metering system acknowledging receipt of the first signal, thereby causing said fund transfer through the external communication link.

5. The method of claim 1, wherein said fund transfer through the external communication link is in response to a request made at the control device of the second postal metering system.

6. The method of claim 5, further comprising the steps of:

conveying a first signal from the control device of the second postal metering system to the control device of the first postal metering system notifying said fund transfer through the external communication link; and
conveying a second signal from the control device of the first postal metering system to the control device of the second postal metering system acknowledging receipt of the first signal, thereby causing said fund transfer through the external communication link.

7. The method of claim 1, wherein the external communication link comprises a wireless communication link.

8. The method of claim 1, wherein the postal metering systems further comprises at least a third metering system, which comprises:

a safekeeping device for storing and releasing funds; and
a secure communication device for ensuring that communications with the safekeeping device are secure, said method further comprising the steps of:

providing a further external communication link from the second postal metering device to the third metering system; and
transferring funds through the further external communication link from the second postal metering device from its secure communication device to the safekeeping device of the third metering system.

9. The method of claim 8, wherein the further external communication link comprises a wireless communication link.

10. The method of claim 1, wherein the safekeeping device also stores secure information and the control device is capable of causing a release of information by the safekeeping device through the secure communication device through the external communication link.

11. A postal metering system comprising:

a safekeeping device for storing and releasing funds;

a secure communication device for ensuring that communications with the safekeeping device are secure;
an input/output communication module, operatively connected to the safekeeping device, to allow funds to be transferred from a data center to the safekeeping device via the input/output communication module; and
a control device, operatively connected to the secure communication device, for causing the safekeeping device to release funds through the secure communication device when the control device receives a request for said fund release, wherein the safekeeping device further comprises an external communication link so as to allow the postal metering system to receive funds from another postal metering system via the secure communication device thereof through the external communication link.

12. A secure system comprising:

a safekeeping device for storing and releasing secure information;
a secure communication device for insuring communications with the safekeeping device are secure;
an input/output communication module, operatively connected to the safekeeping device, to allow secure information to be transferred from a data center to the safekeeping device; and
a control device, operatively connected to the secure communication device, for causing a release of secure information by the safekeeping device through the secure communication device upon receiving a request for said fund release, wherein the safekeeping device further comprises an external communication link so as to allow the secure system to receive secure information from another secure system via the secure communication device thereof through the external communication link.

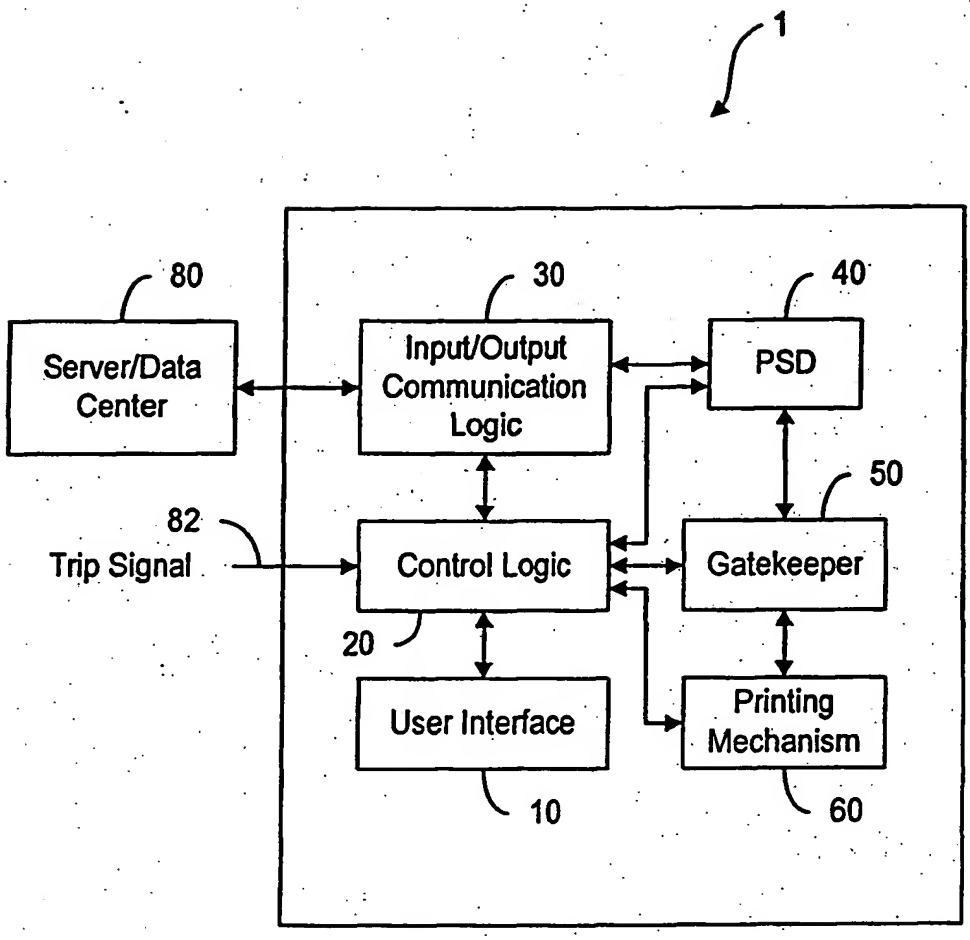

Fig. 1
(Prior Art)

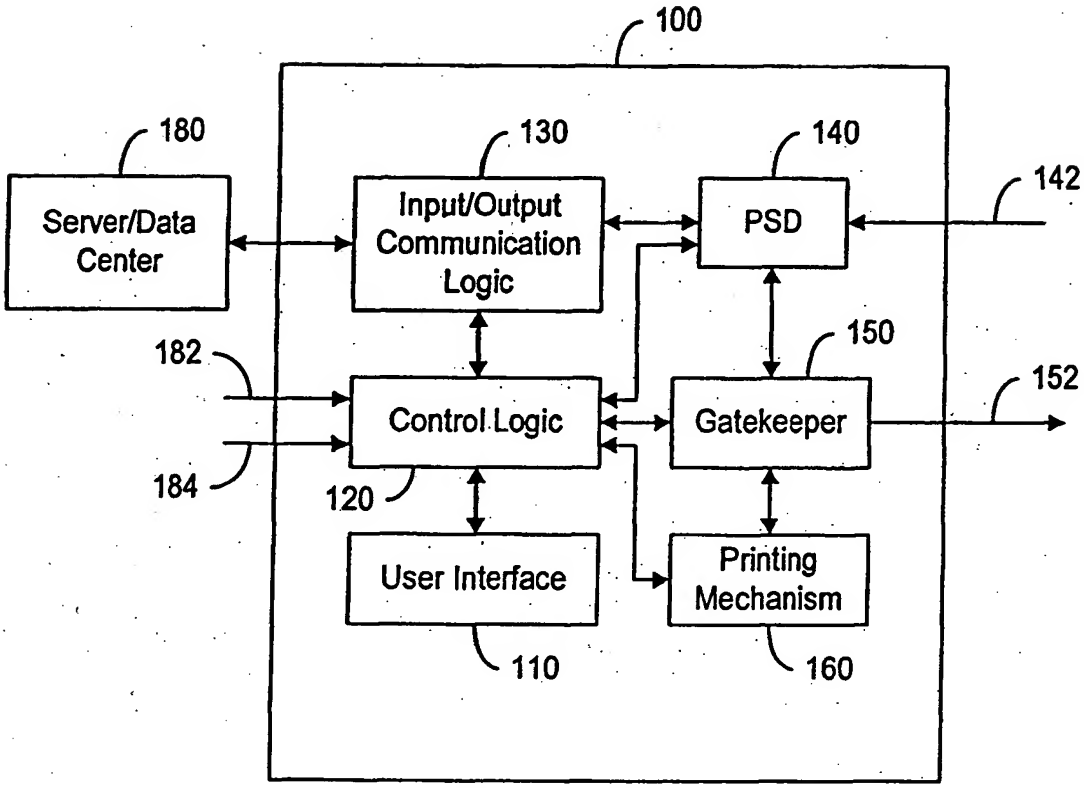
100
180
Server/Data Center
130
Input/Output Communication Logic
140
PSD
142
182
184
Control Logic
120
150
Gatekeeper
152
User Interface
110
Printing Mechanism
160

Fig. 2

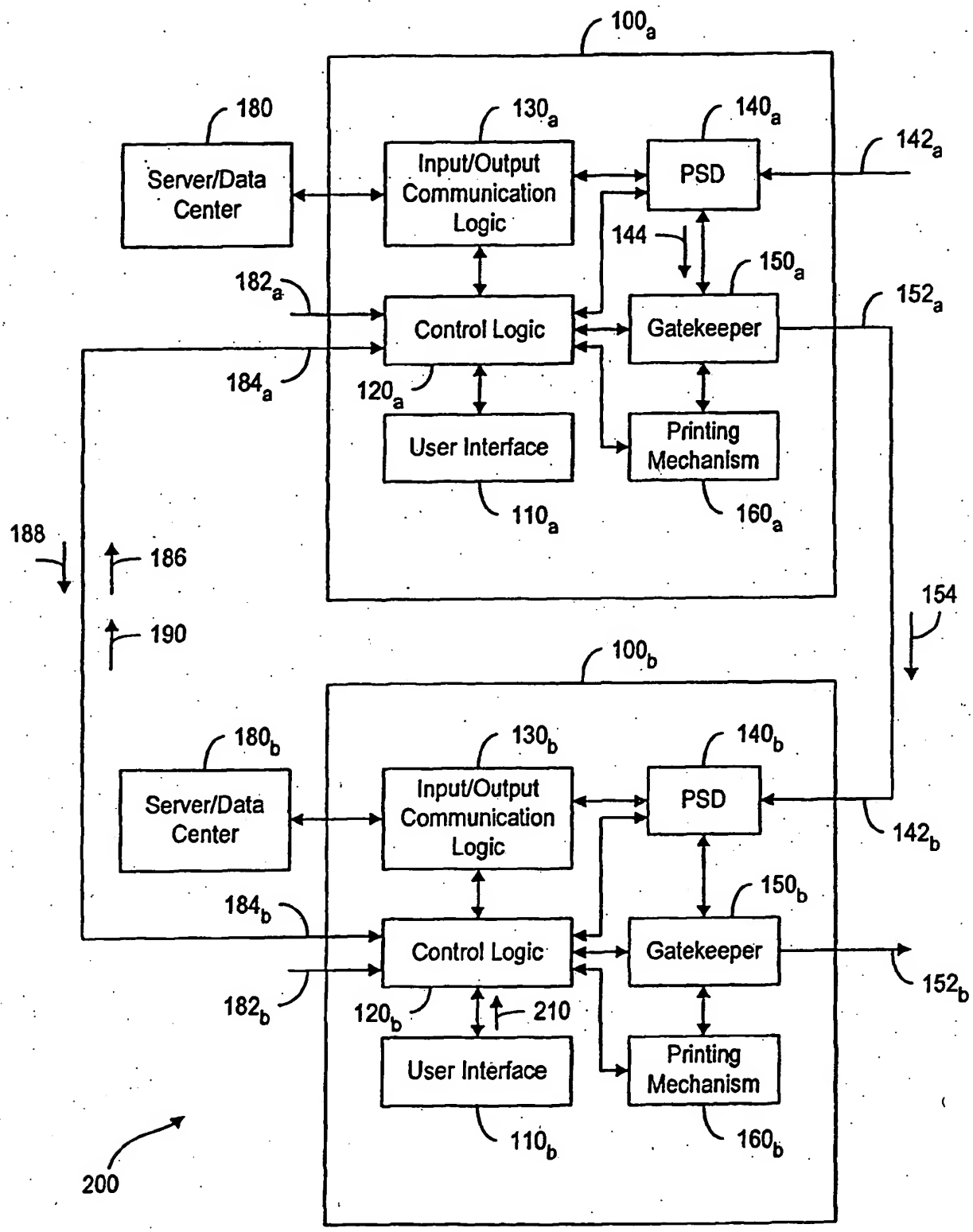
100a
180
Server/Data Center
130a
Input/Output Communication Logic
140a
PSD
142a
144
150a
182a
Control Logic
Gatekeeper
152a
184a
120a
User Interface
Printing Mechanism
110a
160a
188
186
190
154
100b
180b
Server/Data Center
130b
Input/Output Communication Logic
140b
PSD
142b
150b
184b
Control Logic
Gatekeeper
152b
182b
120b
210
User Interface
Printing Mechanism
110b
160b
200

Fig. 3A

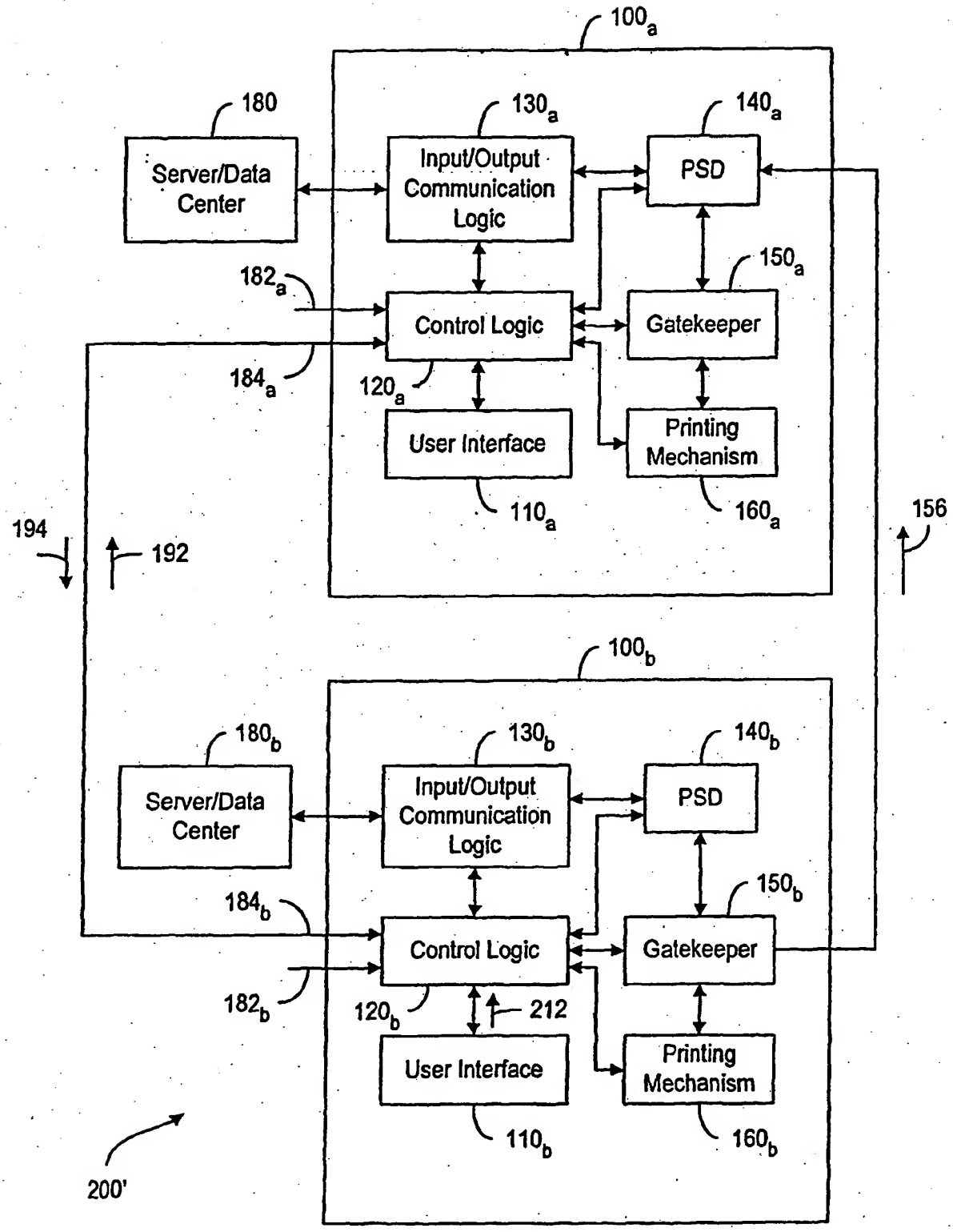
100a
180
Server/Data Center
130a
Input/Output Communication Logic
140a
PSD
150a
182a
Control Logic
Gatekeeper
184a
120a
User Interface
Printing Mechanism
110a
160a
156
194
192
100b
180b
Server/Data Center
130b
Input/Output Communication Logic
140b
PSD
150b
184b
Control Logic
Gatekeeper
182b
120b
212
User Interface
Printing Mechanism
110b
160b
200'

Fig. 3B

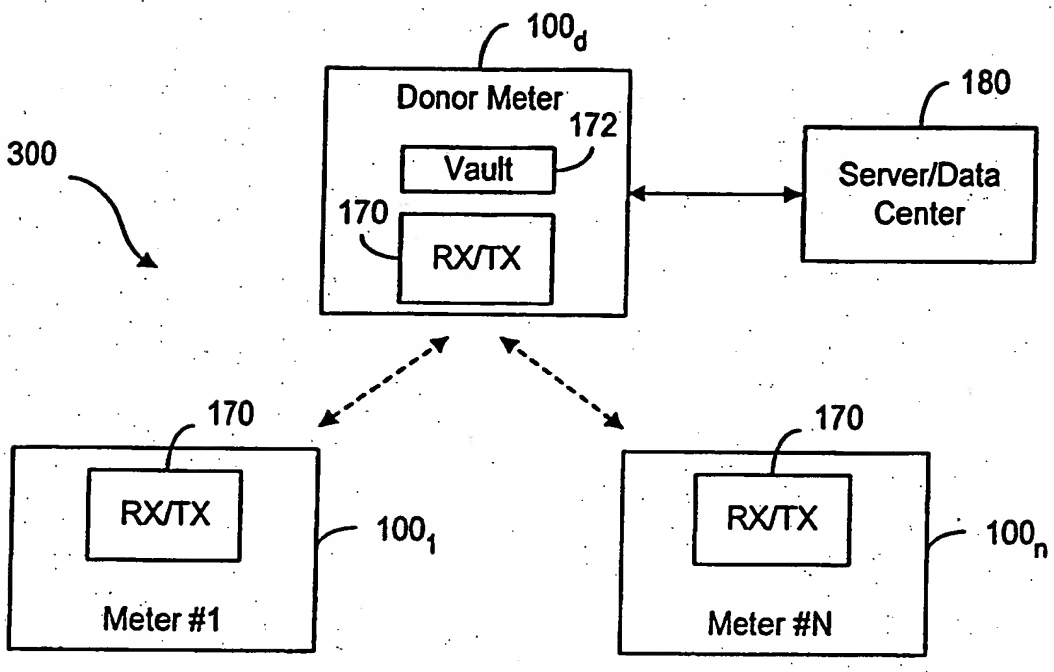
100d
Donor Meter
172
Vault
170
RX/TX
180
Server/Data Center
300
170
RX/TX
100₁
Meter #1
170
RX/TX
100n
Meter #N

Fig. 4

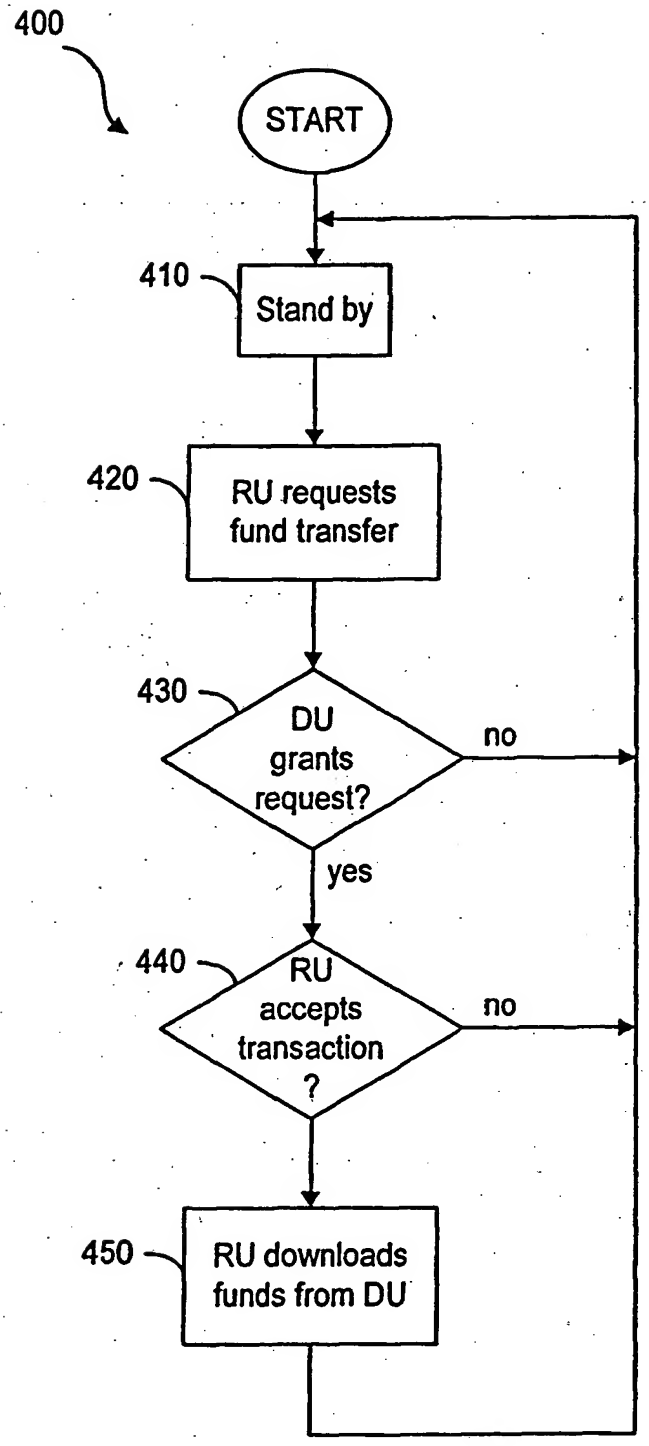
400
START
410
Stand by
420
RU requests fund transfer
430
DU grants request?
no
yes
440
RU accepts transaction ?
no
450
RU downloads funds from DU

Fig. 5

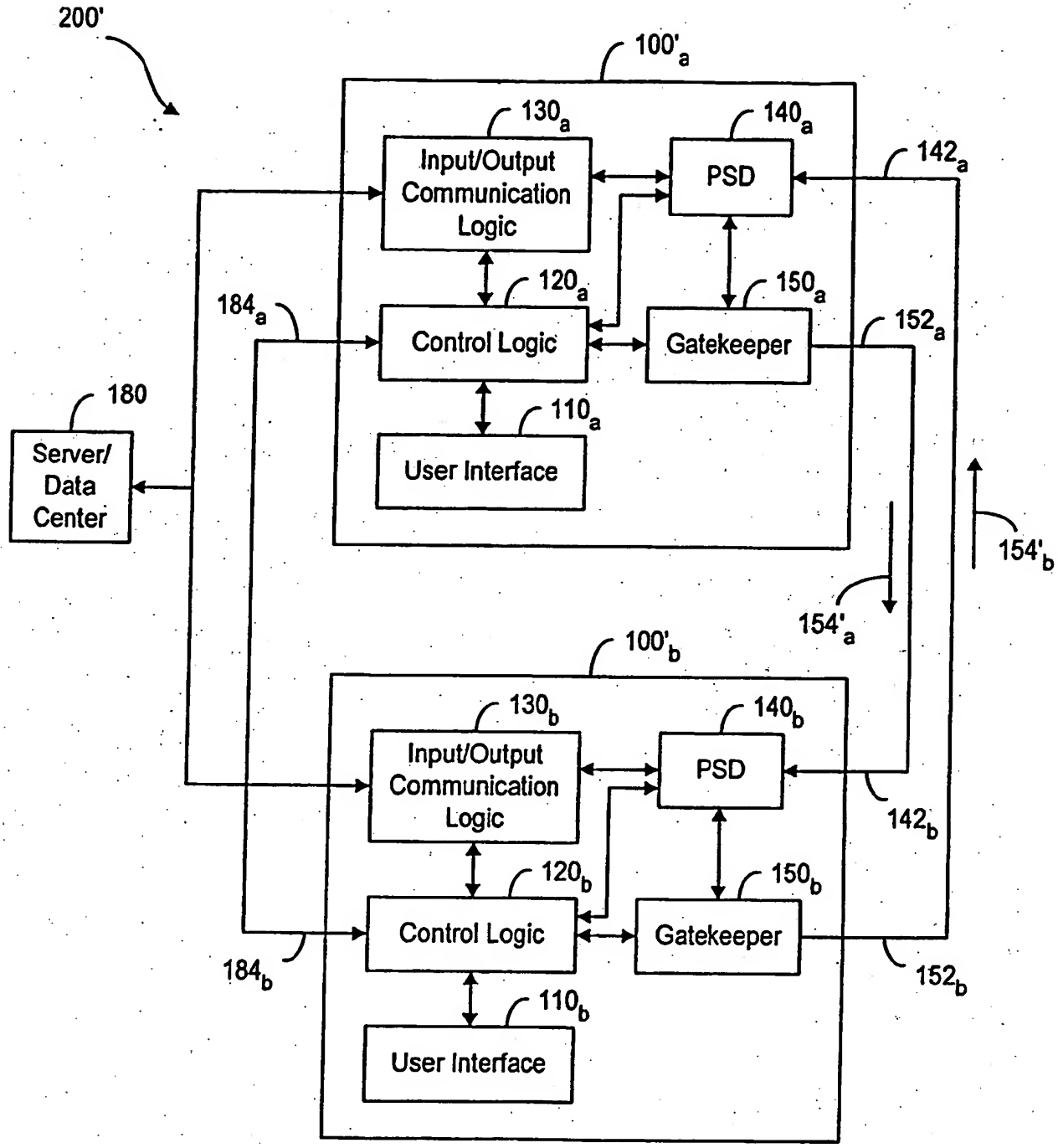
200'
100'a
130a
140a
142a
Input/Output Communication Logic
PSD
120a
150a
184a
Control Logic
Gatekeeper
152a
180
110a
Server/ Data Center
User Interface
154'b
154'a
100'b
130b
140b
Input/Output Communication Logic
PSD
142b
120b
150b
184b
Control Logic
Gatekeeper
152b
110b
User Interface

Fig. 6

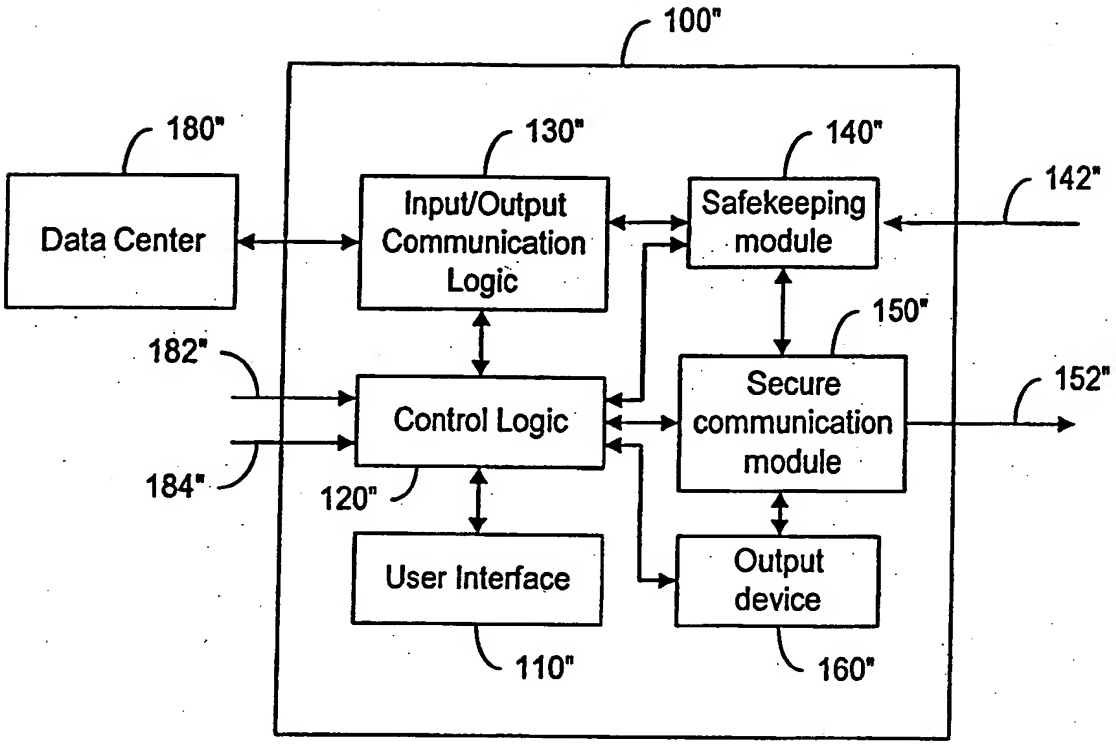
100"
180"
130"
140"
142"
Data Center
Input/Output Communication Logic
Safekeeping module
150"
182"
Control Logic
Secure communication module
152"
184"
120"
User Interface
Output device
110"
160"

Fig. 7